



CCACACGGCTCCGCAGCTTCCCAGGGCTCCGACCAAGCCCGCTTCTGTCCGCC  
TGCAGGGCATTCCAGAAAGATGAGGATATTGCTGTCTTATATTGATGACCT  
ACTGGCATTTGCTGAACGCATTACTGTACGGTCCCAAGGACCTATATGTG  
GTAGAGTATGGTAGCAATATGACAATTGAATGCAAATTCCAGTAGAAAAAC  
AATTAGACCTGGCTGCACTAATTGTCTATTGGAAATGGAGGATAAGAACAT  
TATTCAATTGTGCATGGAGAGGAAGACCTGAAGGTTCAGCATAGTAGCTAC  
AGACAGAGGGCCCGCTGTTGAAGGACCAGCTCTCCCTGGAAATGCTGCAC  
TTCAGATCACAGATGTGAAATTGAGGATGCAAGGGGTGTACCGCTGCATGAT  
CAGCTATGGTGGTCCGACTACAAGCGAATTACTGTGAAAGTC.AATGCCCA  
TACAACAAAATCAACCAAAGAATTGGTTGTGGATCCAGTCACCTCTGAAC  
ATGAACCTGACATGTCAGGCTGAGGGCTACCCCAAGGCCAGTCATCTGGAC  
AAGCAGTGACCATCAAGTCCTGAGTGGTAAGACCACCAACCAATTCCAAG  
AGAGAGGAGAAGCTTTCAATGTGACCAGCACACTGAGAATCAACACAACA  
ACTAATGAGATTTCAGTCACTTTAGGAGATTAGATCCTGAGGAAAACCA  
TACAGCTGAATTGGTCATCCCAGAACTACCTCTGGCACATCCTCCAAATGAA  
AGGACTCACTGGTAATTCTGGAGGCCATCTTATTATGCCTTGGTAGCACT  
GACATTCATCTTCCGTTAAGAAAAGGGAGAATGATGGATGTGAAAAAAATGT  
GGCATCCAAGATAAAACTCAAAGAAGCAAAGTGTACACATTGGAGGAG  
ACGTAATCCAGCATTGAACTCTGATCTCAAGCAGGGATTCTAACCTGTG  
GTTAGGGGTTCATCGGGCTGAGCGTGACAAGAGGAAGGAATGGACCGTG  
GGATGCAGGCAATGTGGACTTAAAGGCCAAGCACTGAAATGGAACCT  
GGCGAAAGCAGAGGAGGAATGAAGAAAGATGGAGTCAAACAGGGAGCC  
TGGAGGGAGACCTGATACTTCAAATGCCTGAGGGCTCATCGACGCCGT  
GACAGGGAGAAGGATACTCTGAACAAGGAGCCTCAAGCAAATCATCCAT  
TGCTCATCCTAGGAAGACGGGTTGAGAATCCCTAATTGAGGGTCAGTCCCT  
CAGAAGTGCCTTGCCTCACTCAATGCCTCAATTCTTCTGCATGACTG  
AGAGTCTCAGTGTGAAACGGGACAGTATTATGATGAGTTTCTTATT  
TTTGAGTCTGTGAGGTCTTGTGATGTGAGTGTGGTTGTGAATGATTCTT  
TTGAAGATATATTGAGTAGATGTTACAATTGCGCAAACAAACTAAACTGCT  
GCTTAATGATTGCTCACATCTAGTAAAACATGGAGTATTGTAAGGTGCTT  
GTCTCCTCTATAACTACAAGTATACATTGAAAGCATAAAGATCAAACCGTT  
GTTGCATAGGATGTCACCTTATTAAACCCATTAATACTCTGGTTGACCTAAT  
CTTATTCTCAGACCTCAAGTGTGTCAGTATCTGTTCCATTAAATATCAG  
CTTACAATTATGTTGAGCCTACACACATAATCTCATTTCATCGCTGTAACC  
ACCCGTTGTGATAACCACTATTATTACCCATCGTACAGCTGAGGAAGCAA  
ACAGATTAAGTAACCTGCCAAACCAAGTAAATAGCAGACCTCAGACTGCCAC  
CCACTGTCTTTATAATACAATTACAGCTATATTACTTAAAGCAATTCTT  
TTATTCAAAAACCATTTATTAAAGTGCCTGCAATATCAATCGCTGTGCCAGG  
CATTGAATCTACAGATGTGAGCAAGACAAAGTACCTGTCCTCAAGGAGCTA  
TAGTATAATGAGGAGATTAACAAGAAAATGTATTATTACAATTAGTCCAGT  
GTCATAGCATAAGGATGATGCGAGGGAAAACCGAGCAGTGTGCCAAGA  
GGAGGAAATAGGCCAATGTGGTCTGGACGGTTGGATATACTTAAACATCTT  
AATAATCAGAGTAATTTCATTACAAAGAGAGGTCGGTACTAAAATAACC  
CTGAAAAATAACACTGGAATTCTTCTAGCATTATATTATTCTGATTG

**FIG. 1A**



CTTGCCATATAATCTAATGCTGTTATAGTGTCTGGTATTGTTAACAGT  
TCTGTCTTTCTATTAAATGCCACTAAATTAAATTACACCTTCCATGAT  
TCAAAATTCAAAAGATCCCAGGGAGATGGTGGAAAATCTCCACTTCATCC  
TCCAAGCCATTCAAGTTCCCTTCCAGAAGCAACTGCTACTGCCTTCATTCA  
TATGTTCTTCTAAAGATAGTCTACATTGGAAATGTATGTTAAAAGCACGTAT  
TTTAAATTTCTAAATAGTAACACATTGTATGCTGCTGTACTTTG  
CTATTTTATTATTTAGTGTCTTATATAGCAGATGGAATGAATTGAAGT  
TCCCAGGGCTGAGGATCCATGCCCTCTTGTCTAAGTTATCTTCCATAGC  
TTTCATTATCTTCATATGATCCAGTATGTTAAATATGCTCCTACATATACA  
TTTAGACAACCACCATTTGTTAAGTATTTGCTCTAGGACAGAGTTGGATTG  
TTTATGTTGCTAAAAGGAGACCCATGGGCTCTCAGGGTGCAGTGA  
ATCTAGTCCTAAAAAGCAATCTTATTAACTCTGTATGACAGAATCATGTC  
TGGAACTTTGTTCTGCTTCTGCAAGTATAAACTTCACTTGATGCTGTA  
CTTGCAAAATCACATTTCTTCTGAAATTCCGGCAGTGTACCTGACTGCT  
AGCTACCCGTGCCAGAAAAGCCTCATTGTTGCTGAACCTTGAATGCC  
ACCAGCTGTCATCACTACACAGCCCTCTAAGAGGCTCTGGAGGTTCGA  
GATTAGATGCCCTGGGAGATCCAGAGTTCCCTTCCCTTGGCCATATTC  
TGGTGTCAATGACAAGGAGTACCTGGCTTGCCACATGTCAAGGCTGAAGA  
AACAGTGTCTCCAACAGAGCTCTGTGTTATCTGTTGTACATGTGCAATTG  
TACAGTAATTGGTGTGACAGTGTCTTGTGAATTACAGGCAAGAATTGTG  
GCTGAGCAAGGCACATAGTCTACTCAGTCTATTCTAAGCCTAACTCCTCCT  
TGTGGTGTGGATTGTAAGGCACTTATCCCTTGTCTCATGTTCATCGTA  
AATGGCATAGGCAGAGATGATACTAATTCTGCATTGATTGCACTTTGT  
ACCTGCATTAATTAAATAAAATATTCTTATTGTTACTGGTAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**FIG. 1B**



Signal peptide

1 MRIFAVFI FMTYWHILLNAFTVTVPKDLIYVVEYGSNMTIECKFPVEKQLDL

\*

Ig-V-like

51 AALIVYWEMEDKNII IQFVHGEEDDLKVQHSSYRQRARLLKDQLSLGNAAALQ

101 ITDVVKLIQDAGVYRCMISYGGADYKRITVKVNAPYNKINQRILVVDPVTSE

Ig-C-like

151 HELTCAEGYPKAEVVIWTSSDHQVLSGKTTNSKREEKLENVTSTLRIN

\*

201 TTTNEIFYCTFRRLDPEENHTAELV IPELPLIAHPPNERTH LVILGALLC

TM

251 LGVALTFIRRRLRKGRMMDVKKCGIQDTNSKKQSDTHLEET

**FIG. 2A**



\*

B7-H1 50 VEYGSNMTIECKE[P]VEKOLDLAALIVYWEM  
B7-1 43 KEVATLSCGHNVS-VEELAQTRIYWQK  
B7-2 30 AYFNETADLPCQFANSQNSLSELVVFWQD

80 EDKNITIQFVHGEED-LKVOHSSYRQRARLL  
68 EKKMVLTMMSGDMN----IWPEYKNRTIFD  
60 QENLVLNEVYL[G]KEKFDSVHSKYMGRTSF D

\*

89 KDQLSIGNAALQITDVKLODA[G]VYRCMISY  
95 IT----NNLSIVILALRPSDEGT[Y]ECVVLK  
90 S----DSWT[RLIHNLQIKDKGLYQCIHH

119 GGADYKR---ITVKVNAPYNKINQRILV  
121 YEKDAFKREHLAEVTLSVKADFPTPSISDF  
115 KKPTGMIRIHQMNSELSVIANF[SOPEIVPI]

\*

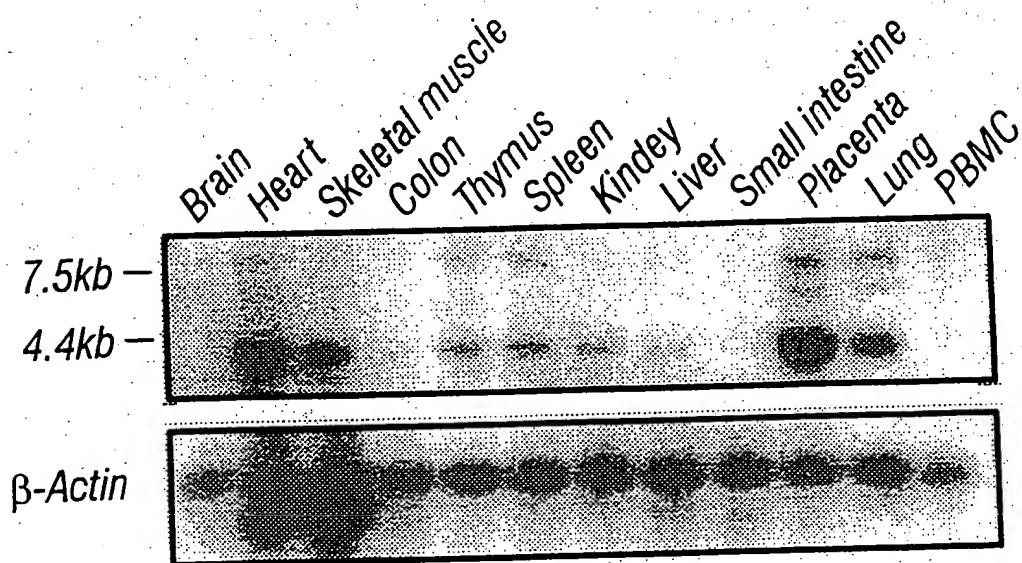
145 DPVTSEHEL--TC-QAE[G]YPKA-EV[WTSS  
151 EIPTSNIRR-IICSTS[G]FPEP-HLSWLEN  
145 SNITENVYINLTCS[SIH]GYPEPKKMSVLLR

171 DHQ---VLSGKT[TTT]TNSKRE[E]KLENVTSTL  
179 GE---ELNAINTTVSQDPETELYAVSSKL  
175 TKNSTIEYDGIMQK-SQDNVTELYDVSISL

\*

198 RIN---TTNEIFYCTFRRLDPEENHTAEL  
205 DFN---MTTNHSFMCLIKYGHLRVN--QTEF  
204 SVSFDPVTSNMTIFCILETDKTRILLS-SPE

226 V[TP]ELPLAHPPNERT  
230 NWNTTKQEHFPDNIL  
233 STELEDPOP[P]PDHIP



**FIG. 3**

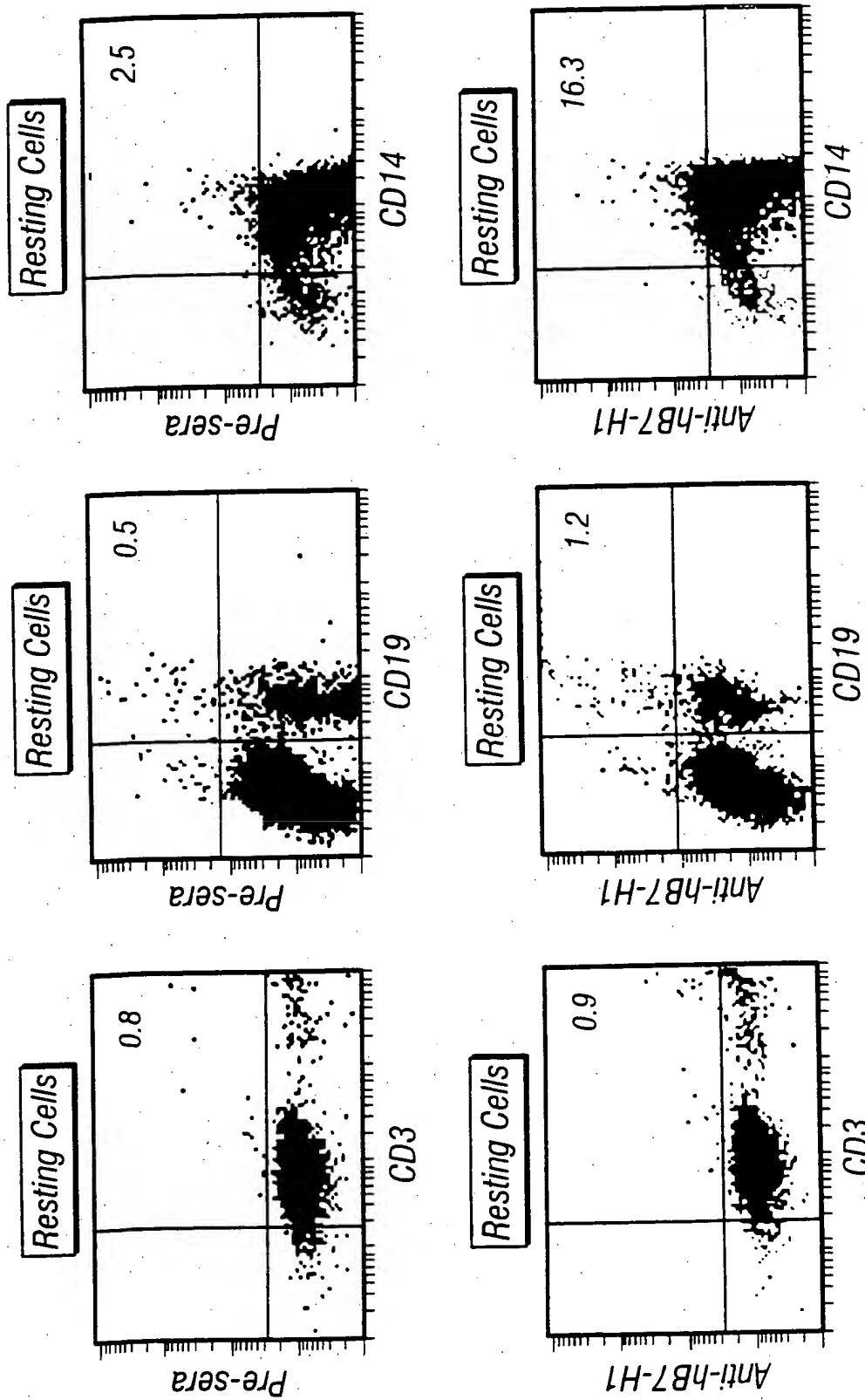


FIG. 4A

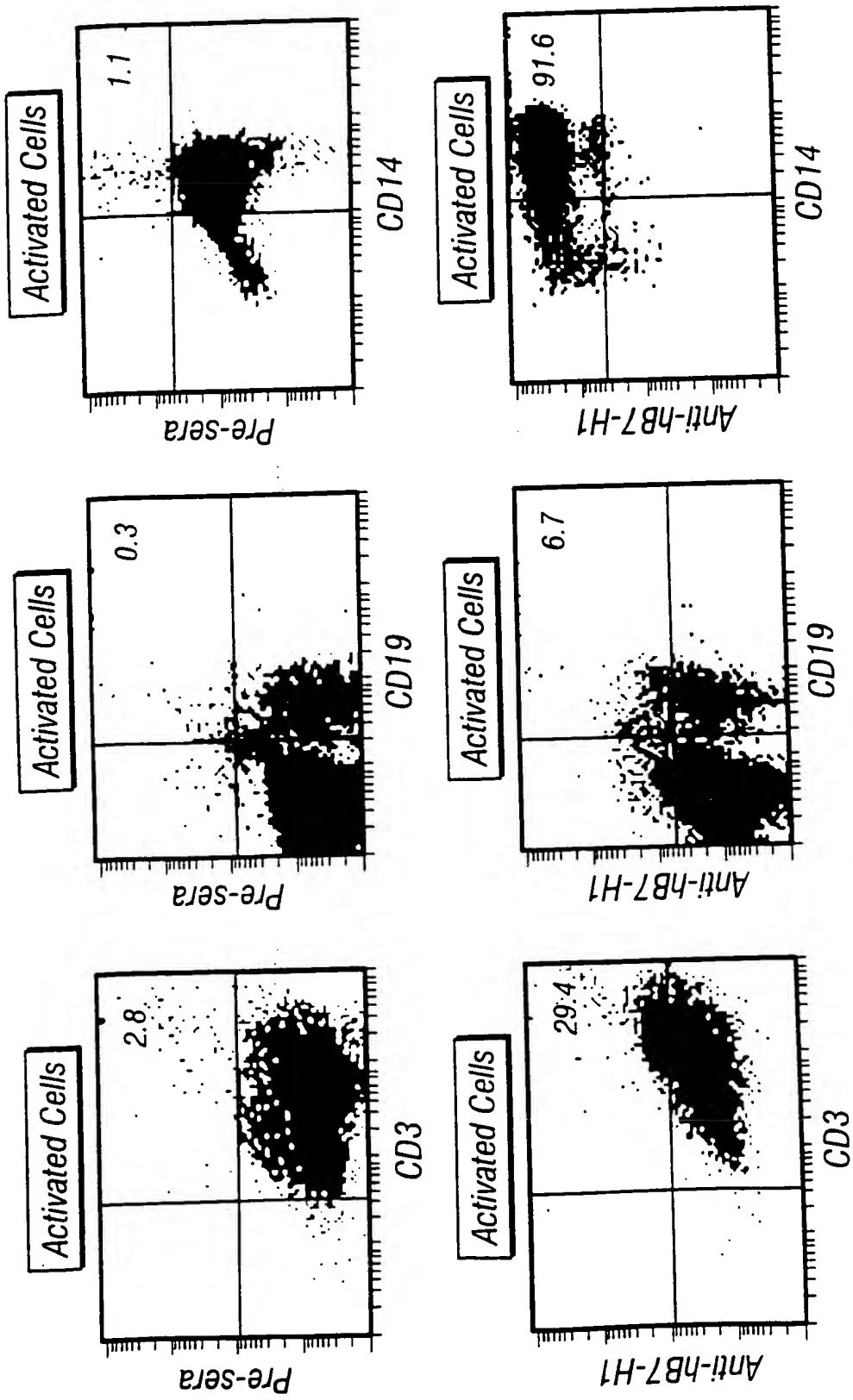


FIG. 4B

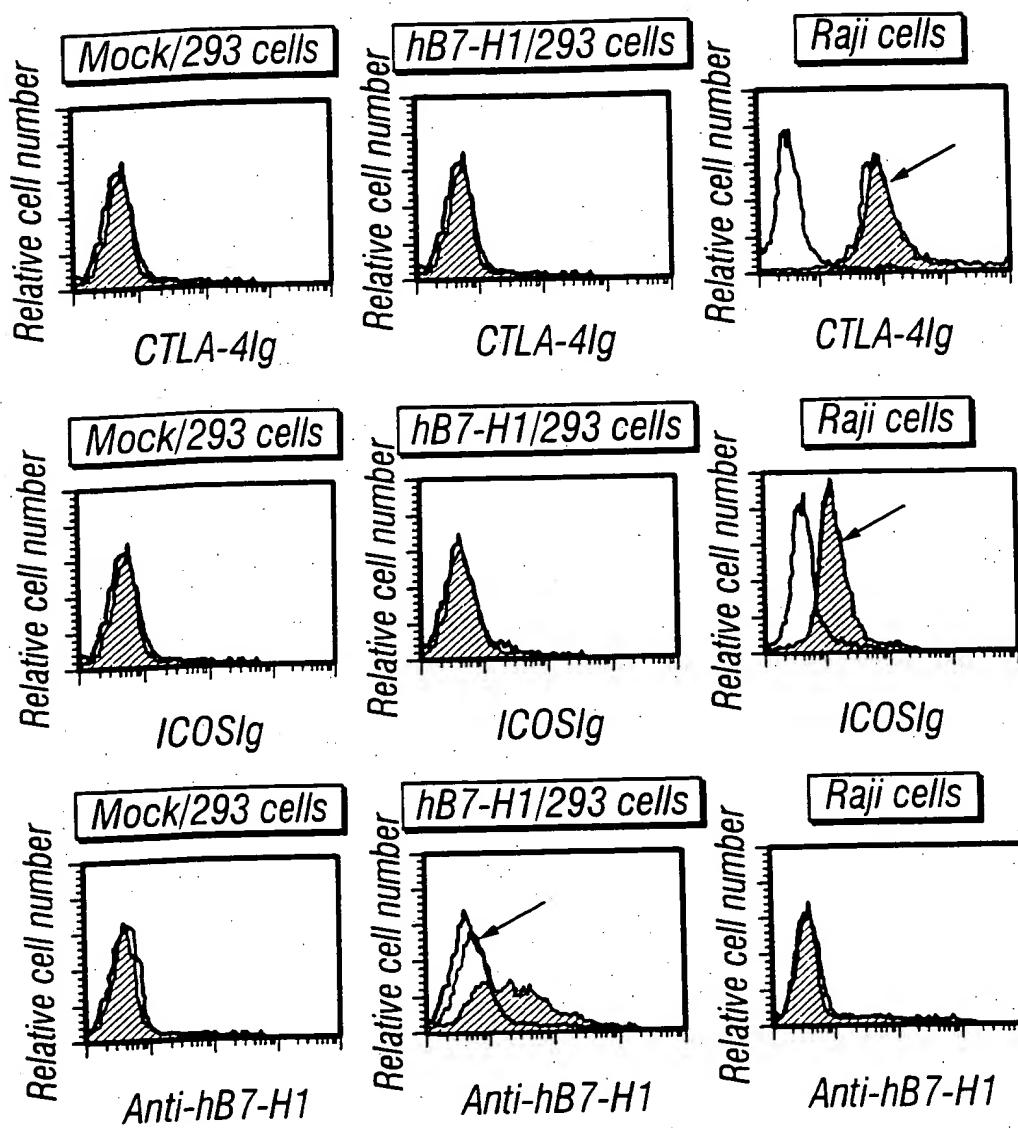


FIG. 5A

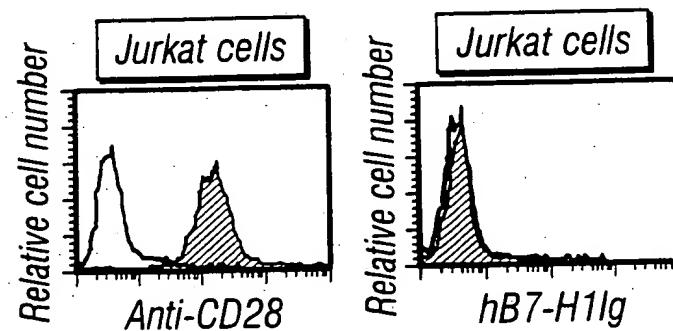


FIG. 5B

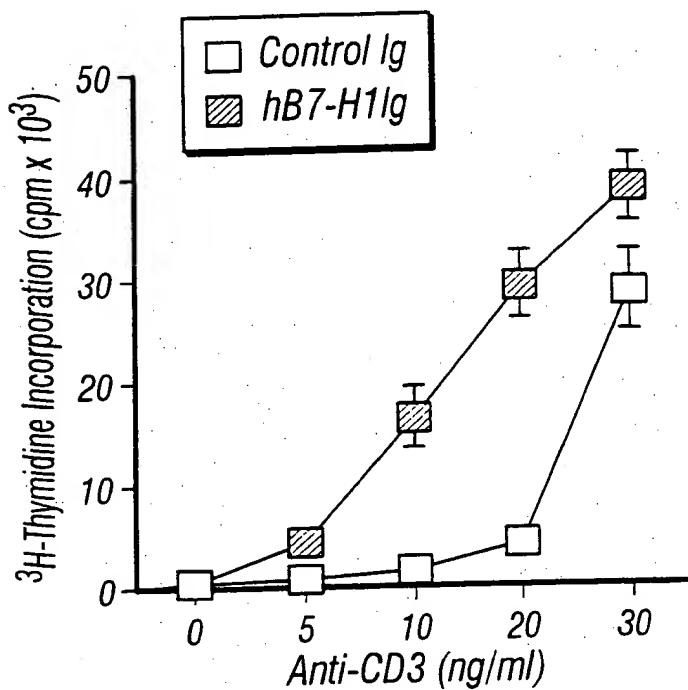


FIG. 6A

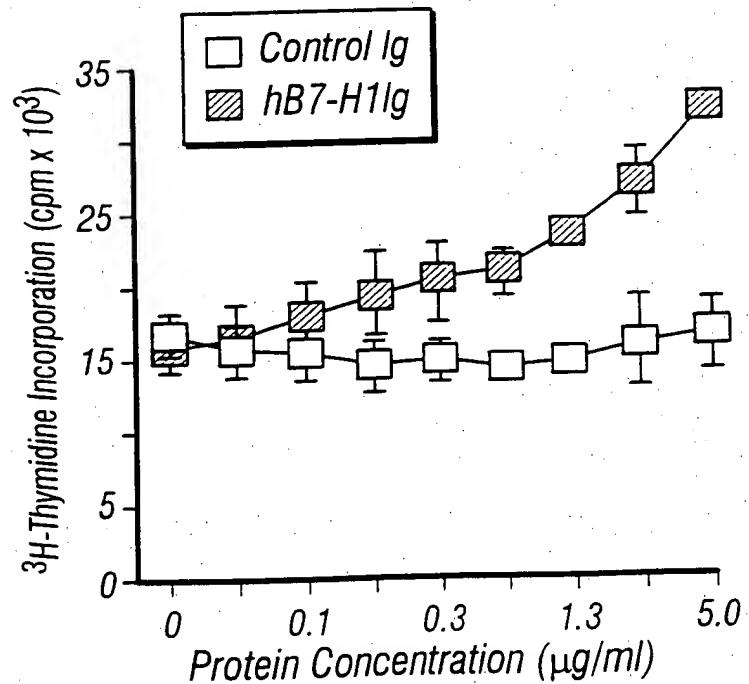


FIG. 6B

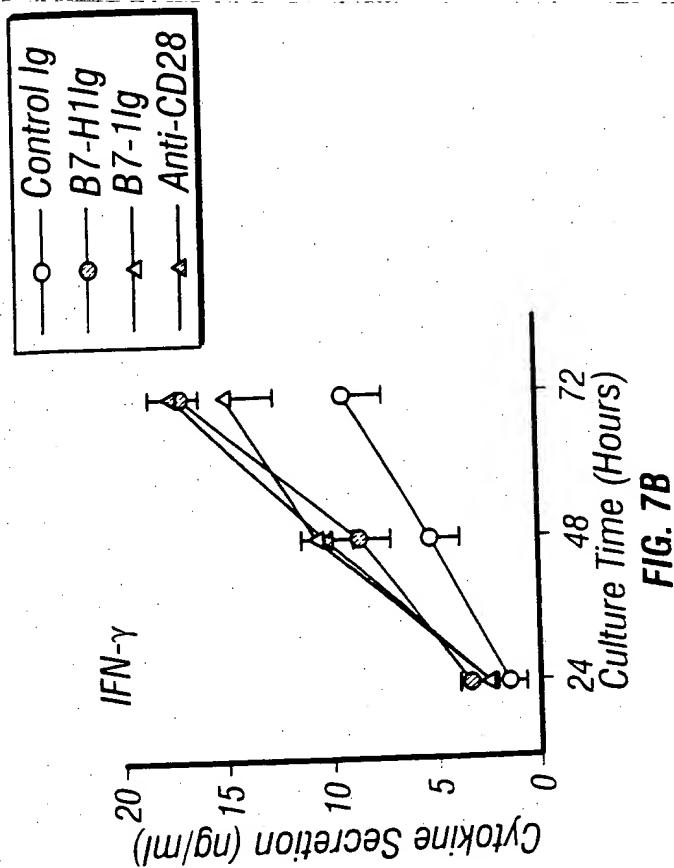


FIG. 7B

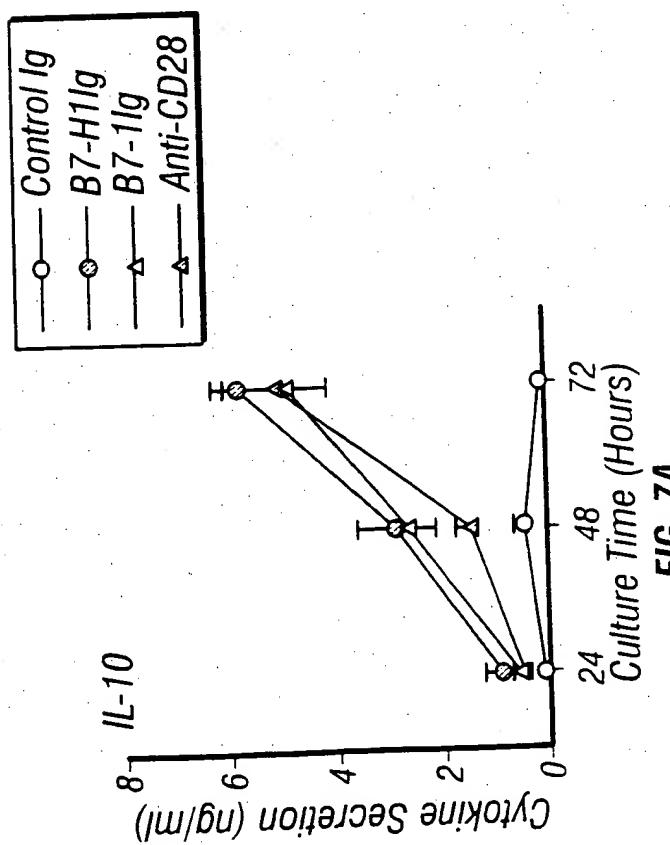


FIG. 7A

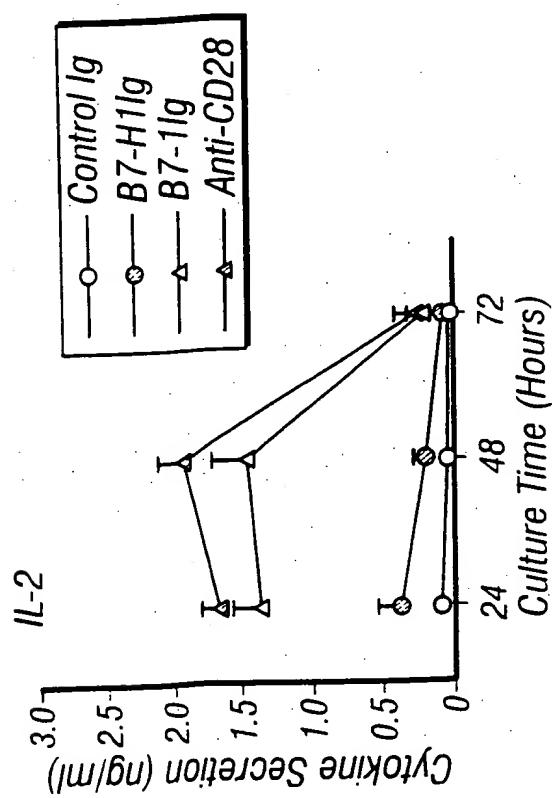


FIG. 7C

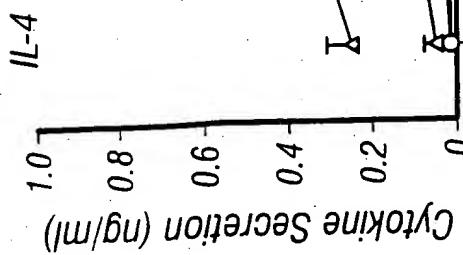


FIG. 7D

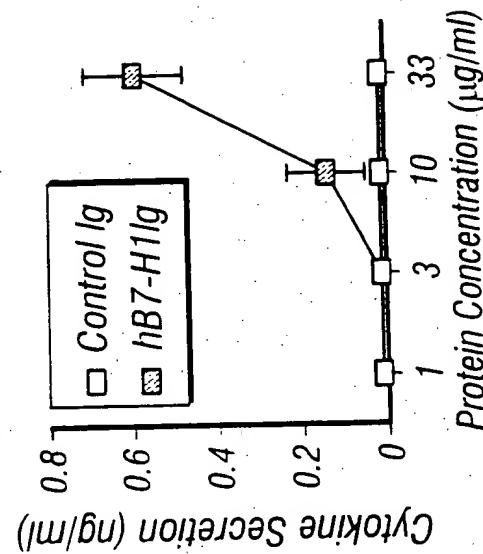


FIG. 7E

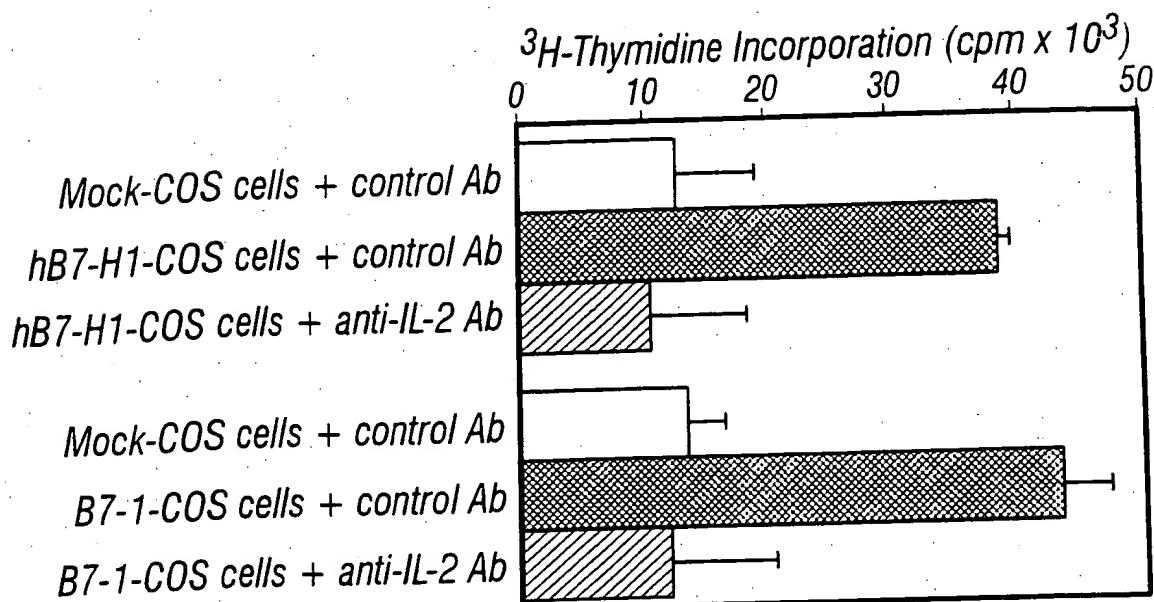


FIG. 8A

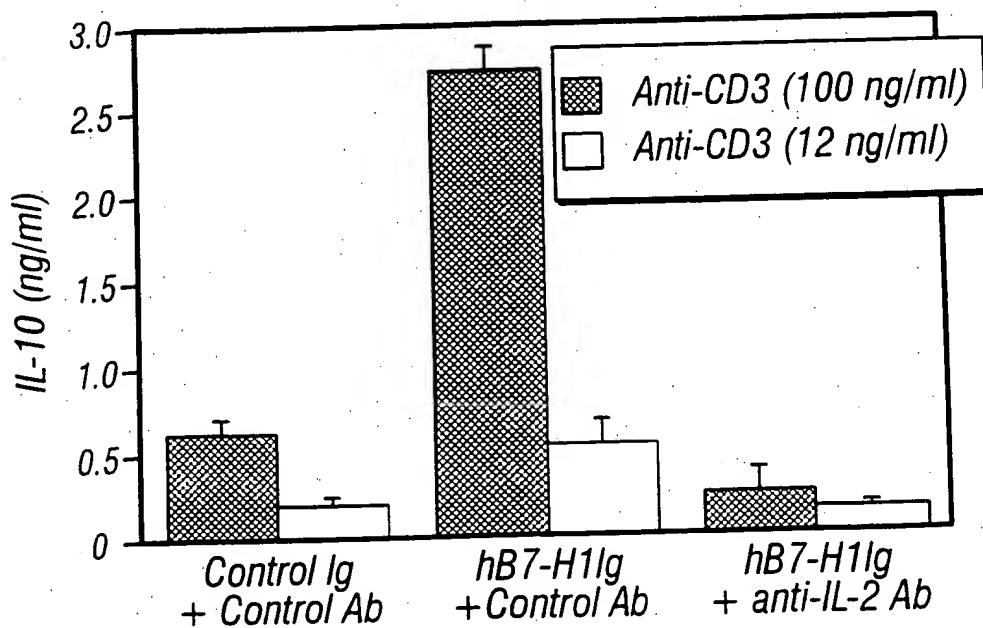


FIG. 8B

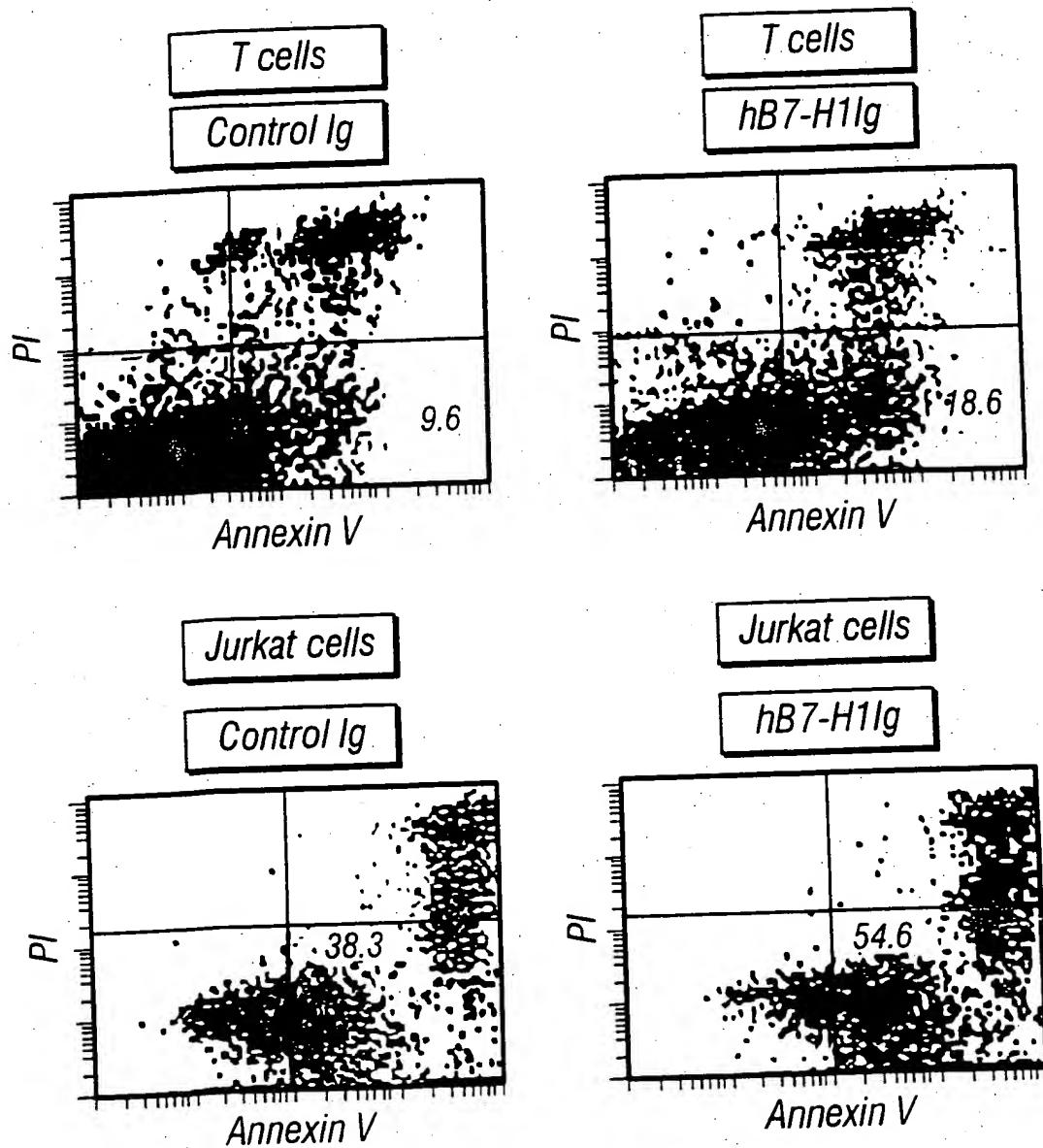


FIG. 9A

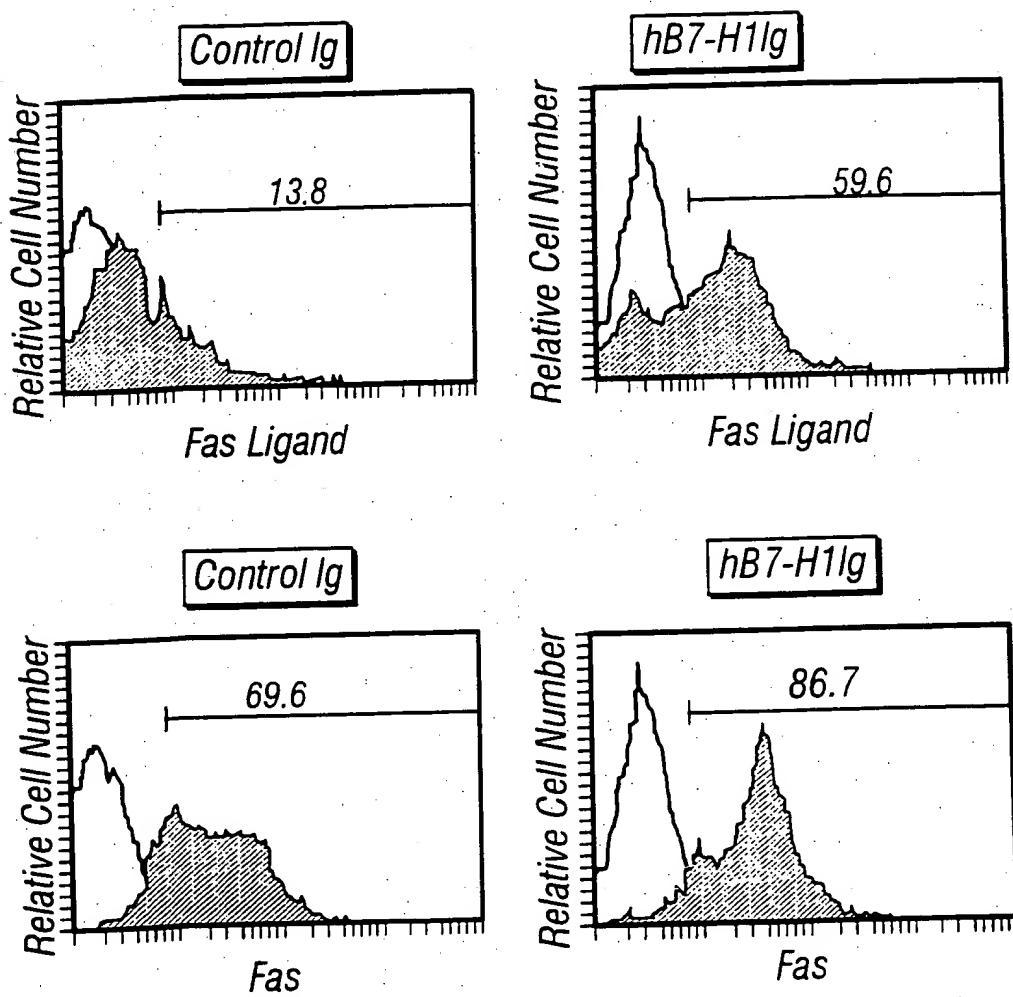


FIG. 9B



ATGAGGATATTGCTGGCATTATATTACAGCCTGCTGTCACTGCTACGGGC  
GTTTACTATCACGGCTCAAAGGACTTGTACGTGGTGGAGTATGGCAGCAAC  
GTCACGATGGAGTGCAGATTCCCTGTAGAACGGGAGCTGGACCTGCTTGCCT  
TAGTGGTGTACTGGGAAAAGGAAGATGAGCAAGTGATTCAAGTTGTGGCAGG  
AGAGGAGGACCTTAAGCCTCAGCACAGCAACTCAGGGGGAGAGCCTCGCT  
GCCAAAGGACCAGCTTGAAAGGGAAATGCTGCCCTCAGATCACAGACGTC  
AAGCTGCAGGACGCAGGCAGGCGTTACTGCTGCATAATCAGCTACGGTGGTGCAG  
ACTACAAGCGAATCACGCTGAAAGTCAATGCCCATACCGCAAAATCAACCA  
GAGAATTCCGTGGATCCAGCCACTTCTGAGCATGAACATAATATGTCAGGCC  
GAGGGTTATCCAGAAGCTGAGGTAATCTGGACAAACAGTGACCAACCCG  
TGAGTGGGAAGAGAAGTGTACCACTTCCCGACAGAGGGGATGCTTCTCAA  
TGTGACCAGCAGTCTGAGGGTCAAGGCCACAGCGAATGATGTTTACTGT  
ACGTTTGGAGATCACAGCCAGGGCAAAACACACAGCGGAGCTGATCATCC  
CAGAACTGCCTGCAACACATCCTCACAGAACAGGACTCACTGGGTGCTTCT  
GGGATCCATCCTGTTGTTCTCATTGTAGTGTCCACGGTCCTCCTCTTGAG  
AAAACAAGTGAGAATGCTAGATGTGGAGAAATGTGGCGTTGAAGATAACAAG  
CTCAAAAAACCGAAATGATACACAATTGGAGGAGACGTAA

**FIG. 10**

MRIFAGIIFTACCHLLRAFTITAPKDLVVEYGSNVTMECRFPVERELDLLALVV  
YWEKEDEQVIQFVAGEEDLKPQHSNFRGRASLPKDQLLKGNAAALQITDVKLQDA  
GVYCCIISYGGADYKRITLKVNAPYRKINQRISVDPATSEHELICQAEGYPEAEVI  
WTNSDHQPVSGKRSVTSRTEGMLLNVTSSLRVNATANDVFYCTFWRSQPGQN  
HTAELIPELPATHPPQNRTHWVLLGSILLFLIVVSTVLLFLRKQVRMLDVEKCGV  
EDTSSKNRNDTQFEET

**FIG. 11**

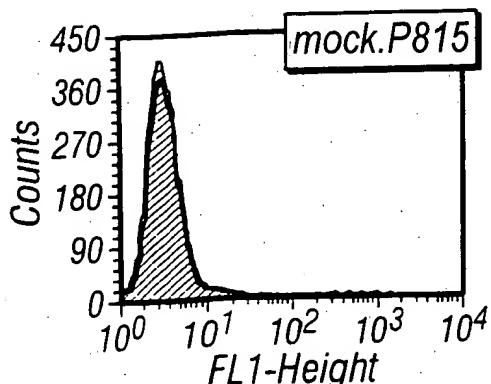


FIG. 12A

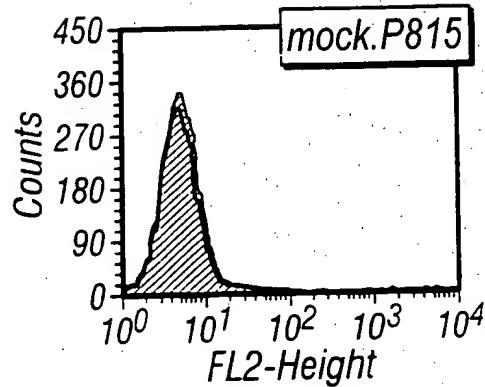


FIG. 12B

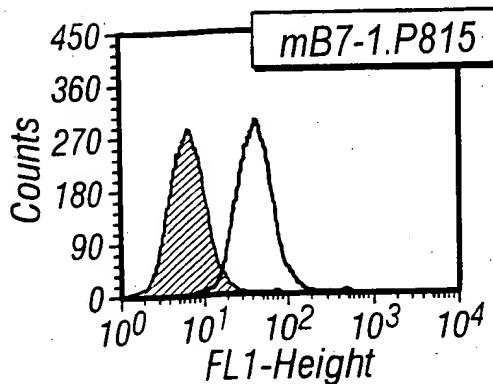


FIG. 13A

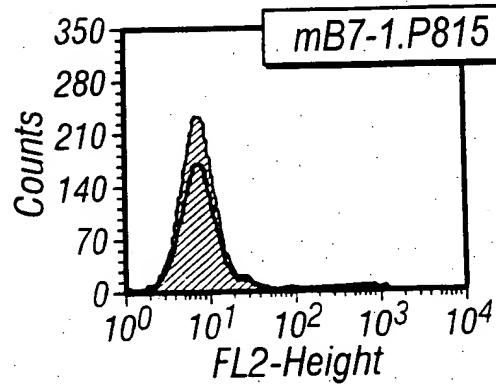


FIG. 13B

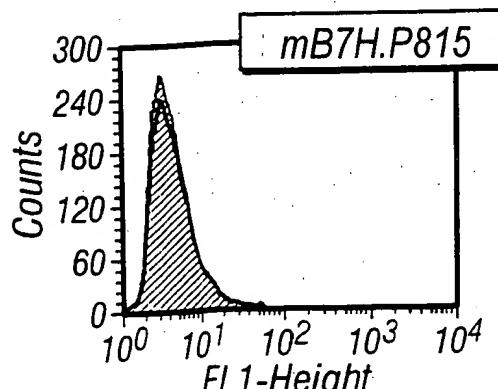


FIG. 14A

anti-mB7-1-FITC →

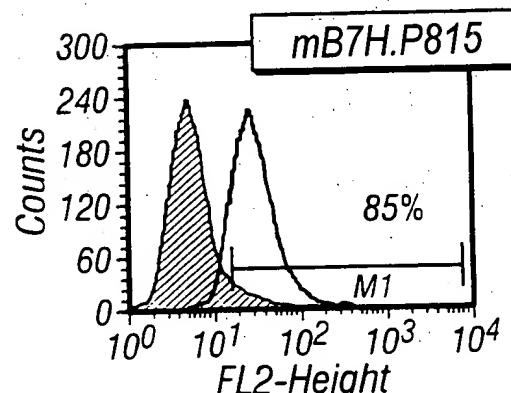


FIG. 14B

anti-mB7H/PE →

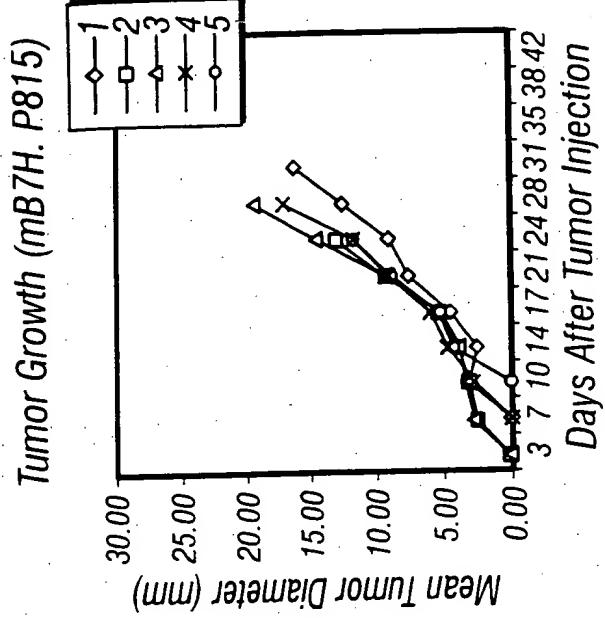


FIG. 15B

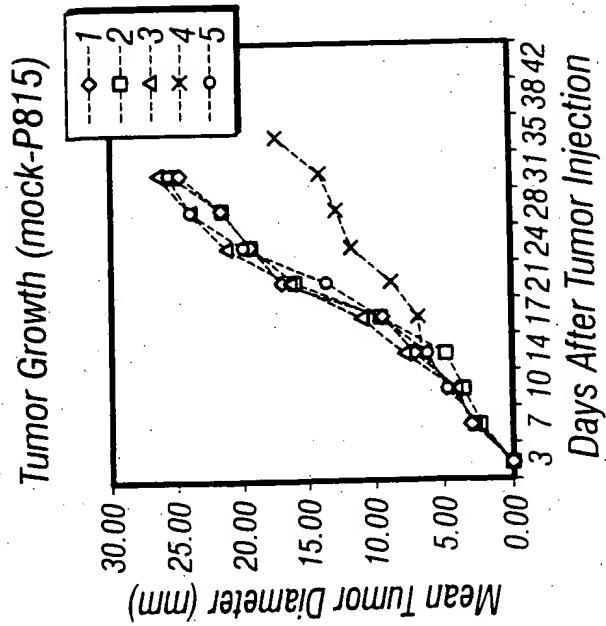


FIG. 15A